

1. Supplementary material

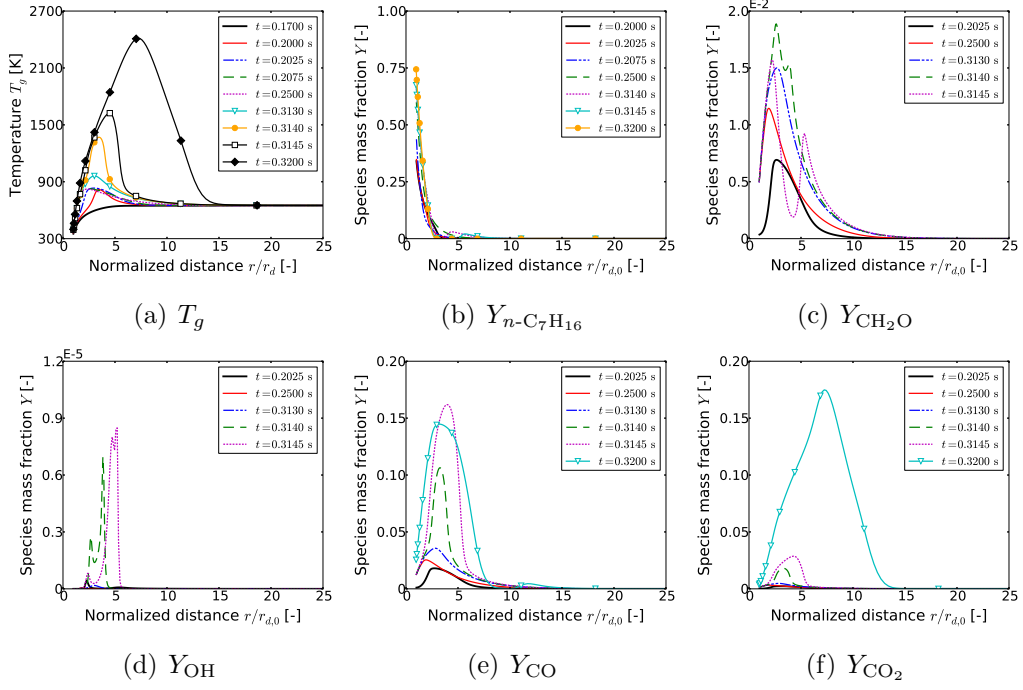


Figure 1S: Gas-phase temperature (a) and mass fraction of selected species ((b)-(f)) plotted against normalized radial coordinate at selected instants of time. Data shown correspond to $p = 5$ atm, $T_{g,0} = 650$ K and $d_0 = 0.7$ mm.

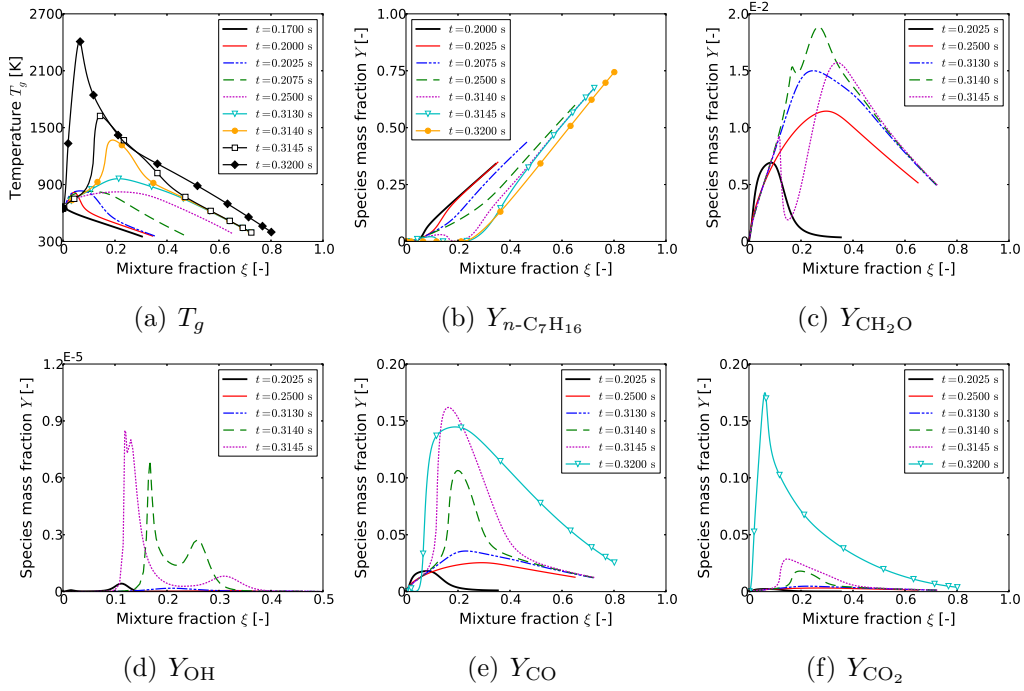


Figure 2S: Gas-phase temperature (a) and mass fraction of selected species ((b)-(f)) plotted against mixture fraction at selected instants of time. Data shown correspond to $p = 5$ atm, $T_{g,0} = 650$ K and $d_0 = 0.7$ mm.

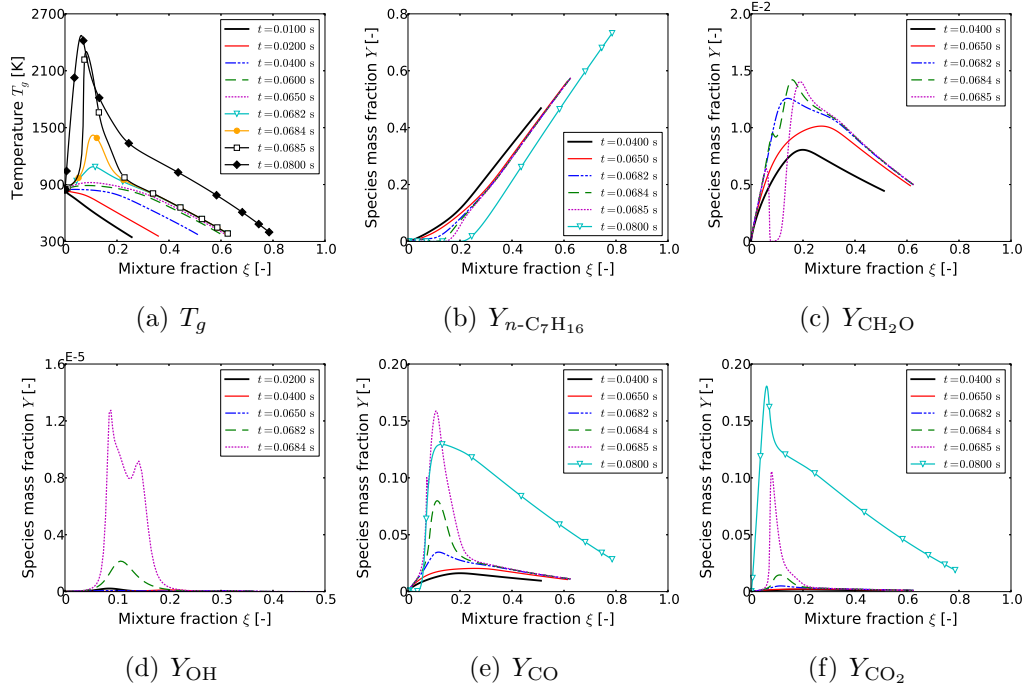


Figure 3S: Gas-phase temperature (a) and mass fraction of selected species ((b)-(f)) plotted against mixture fraction at selected instants of time. Data shown correspond to $p = 5$ atm, $T_{g,0} = 850$ K and $d_0 = 0.7$ mm.

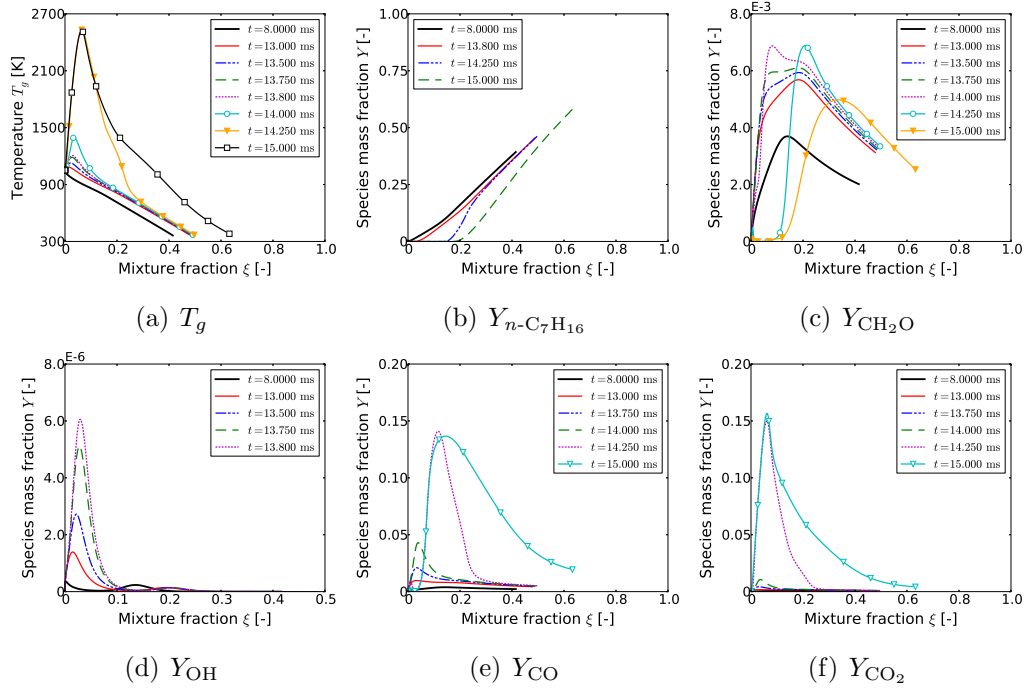


Figure 4S: Gas-phase temperature (a) and mass fraction of selected species ((b)-(f)) plotted against normalized radial coordinate at selected instants of time. Data shown correspond to $p = 5$ atm, $T_{g,0} = 1050$ K and $d_0 = 0.7$ mm.